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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,615	10/23/2003	Mark D. Peterson	IFC 369C	6466

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EXAMINER
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CRUZ, MAGDA

ART UNIT	PAPER NUMBER
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2851

DATE MAILED: 11/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/693,615	<b>Applicant(s)</b> PETERSON, MARK D.	
	<b>Examiner</b> Magda Cruz	<b>Art Unit</b> 2851	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 September 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10, 12 and 14-33 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19-27 is/are allowed.
- 6) ☒ Claim(s) 1-10, 12, 14, 15 and 28-33 is/are rejected.
- 7) ☒ Claim(s) 16-18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 October 2003 and 14 September 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

1. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because they failed to show every feature of the invention specified in the claims, i.e. a "plurality of bumps has a different size than another one of the plurality of bumps" (claim 2), "plurality of bumps has a different size" (claim 3), "plurality of bumps is randomly distributed over the output side of the Fresnel lens" (claims 4, 7 and 11), "at least one of plurality of bumps has a different shape than another one of the plurality of the plurality of bumps" (claim 5), and "each of the plurality of bumps has a different shape" (claim 6). The subject matter of this application admits of illustration by a drawing to facilitate understanding of the invention. Furthermore, the examiner believes that a block diagram is no sufficient to meet the drawing requirement, since the drawings filed by the applicant on 09/14/2005 do not properly illustrate applicant's invention. Applicant is advised to employ the services of a competent patent draftsperson outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-10, 12, 14-15 and 28-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurematsu in view of Goldenberg et al. and further in view of Ogawa.

Kurematsu (US Patent Number 6,808,271 B1) discloses (claims 1, 15, 28 and 33) a display device (30) comprising a lens system (2) to project an image, a substantially planar back plate mirror (20) to reflect the image to the Fresnel lens (12, 13, see Figure 4), the back plate mirror (20) substantially parallel to the Fresnel lens (12, 13, see Figure 4); and a substantially planar intermediate mirror (21) to reflect the image projected by the lens system (2) to the back plate mirror (20); (claim 29) wherein the screen (1) is a Fresnel lens (12, 13).

Kurematsu teaches the salient features of the present invention, except (claim 1) a Fresnel lens having a plurality of bumps on an output side of the Fresnel lens, and an intermediate mirror substantially perpendicular to the optic axis; (claims 2 and 5) wherein at least one of the plurality of bumps has a different size than another one of the plurality of bumps; (claim 3) wherein each of the plurality of bumps has a different size; (claims 4 and 7) wherein the plurality of bumps is randomly distributed over the output side of the Fresnel lens; (claim 6) wherein each of the plurality of bumps has a

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different shape; (claim 8) wherein the plurality of bumps are of unitary construction with the Fresnel lens; (claim 9) wherein the Fresnel lens includes a diffuser to diffuse stray light that passes through the Fresnel lens; (claims 10 and 32) wherein the diffuser is of unitary construction with the Fresnel lens; (claim 12) wherein the plurality of bumps comprises a plurality of lenticular bumps; (claim 14) wherein the plurality of lenticular bumps are of unitary construction with the Fresnel lens; (claim 15) the Fresnel lens having an output ray angle of substantially zero near a center of the Fresnel lens and an output ray angle whose magnitude increases as a radial distance (R) from the center increases; (claim 28) a screen having a diffusion layer; (claim 30) wherein the diffusion layer is affixed to an output side of the Fresnel lens; (claim 31) wherein the diffusion layer is laminated to the output side of the Fresnel lens; (claim 33) where the Fresnel lens has a plurality of bumps adapted to scatter stray light. However, Kurematsu discloses a screen (1) comprising a Fresnel lens (12, 13).

Goldenberg et al. (US Patent Number 4,773,731) discloses a Fresnel lens (302, 310) having a plurality of bumps (320, 322) on an output side (i.e. right side) of the Fresnel lens (310); wherein at least one of the plurality of bumps (320) has a different size than another one of the plurality of bumps (322); wherein each of the plurality of bumps (320, 322) has a different size (see Figure 3); wherein the plurality of bumps (320, 322) is randomly distributed over the output side (i.e. right side) of the Fresnel lens (310); wherein each of the plurality of bumps (320, 322) has a different shape (see Figure 3); wherein the plurality of bumps (320, 322) are of unitary construction (300) with the Fresnel lens (310); wherein the Fresnel lens (310) includes a diffuser (316) to

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diffuse stray light (column 4, lines 60-63) that passes through the Fresnel lens (310); wherein the diffuser (316) is of unitary construction (see Figure 3) with the Fresnel lens (310); wherein the plurality of bumps comprises a plurality of lenticular bumps (column 2, lines 12-16); wherein the plurality of lenticular bumps (320, 322) are affixed to the output side (i.e. right side) of the Fresnel lens (310); wherein the plurality of lenticular bumps (320, 322) are of unitary construction (300) with the Fresnel lens (310); the Fresnel lens having an output ray angle of substantially zero near a center of the Fresnel lens and an output ray angle whose magnitude increases as a radial distance (R) from the center increases (see equation 6); a screen (300) having a diffusion layer (316); wherein the diffusion layer (316) is affixed to an output side (i.e. right side) of the Fresnel lens (310); wherein the diffusion layer (316) is laminated to the output side (i.e. right side) of the Fresnel lens (310); where the Fresnel lens has a plurality of bumps adapted to scatter stray light (column 2, lines 12-20).

Ogawa (US Patent Number 6,513,935 B2) discloses an intermediate mirror (Figure 2, element 3a) substantially perpendicular to the optic axis (see Figure 2).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize the screen comprising a Fresnel lens having a diffusing layer and a plurality of bumps as disclosed by Goldenberg et al. in substitution of the screen from Kurematsu's invention, and an intermediate mirror substantially perpendicular to the optic axis like the one shown by Ogawa, in substitution of the intermediate mirror from Kurematsu's invention, for the purpose of having a projection

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screen without corner illumination deficiencies (Goldenberg et al., column 1, lines 31-33) and correction of the distortion aberration (Ogawa, column 3, lines 5-6).

***Allowable Subject Matter***

4. Claims 19-27 are allowed.
5. Claims 16-18 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

6. Applicant's arguments filed 09/14/2005 have been fully considered but they are not persuasive.
7. The applicant has argued that Ogawa does not teach the "a substantially planar intermediate mirror". However, the examiner used Kurematsu to show said limitation.
8. The applicant has argued that Goldenberg et al. does not teach, "a plurality of bumps affixed to or formed on an output side of the Fresnel lens". However, Goldenberg et al. teaches a plurality of bumps (Figure 3, elements 320, 322) affixed to or formed on an output side of the Fresnel lens (i.e. since the light enters from the left side of the Fresnel lens 310, therefore, the light exits on the right side of said Fresnel lens 310, which is the side having a plurality of bumps, elements 320 and 322).
9. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by

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combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Goldenberg et al. discloses a Fresnel lens having a diffusing layer and a plurality of bumps for the purpose of having a projection screen without corner illumination deficiencies (column 1, lines 31-33), and Ogawa teaches an intermediate mirror substantially perpendicular to the optic axis for the purpose (column 3, lines 5-6) of correction of the distortion aberration.

10. Applicant's arguments regarding the Objection to the Drawings have been fully considered but they are not persuasive. The applicant is respectfully requested to provide new corrected drawings that facilitate understanding of the invention.

### ***Conclusion***

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any



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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Magda Cruz whose telephone number is (571) 272-2114. The examiner can normally be reached on Monday through Thursday 8:00-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**William Perkey**  
**Primary Examiner**

Magda Cruz  
Patent Examiner

November 15, 2005